

PROJECT TITLE : Pilot Plant Operations  
PERIOD COVERED : June 29th - July 25th, 1980  
WRITTEN BY : N. Lüthi

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## 1. EQUIPMENT

### 1.1. Extraction

A Sweco vibrator was tested to improve the liquor clean up at the outlet of the extractor. The results of these tests showed no significant improvement against the existing basket filter (Ref. 1).

### 1.2. Dryer

The dryer is in bad conditions and broke down several times. It was provisionally repaired and an estimate was asked from the FTR workshop to overhaul the equipment during the summer shut down of the pilot plant.

In the long run the dryer will have to be replaced.

### 1.3. Centrifuge

The motor of our centrifuge was repaired and controlled by Alfa-Laval.

A written report on the reasons for these motor failures is expected from the supplier.

## 2. MATERIALS

### 2.1. Antifoam Paracum

Our problem with the antifoam Paracum was discussed with the supplier, Dr. Kolb AG (Ref. 2). The supplier agreed to improve upon the quality control of the finished product.

### 2.2. Extract of NINO trial 57

All the drums in Onnens were checked in order to change the corroded plugs (Ref. 2).

About a third of the plugs had to be changed.

Two samples of extract were given to the PME QC lab for the determination of aluminium (Ref. 3).

The following results were found :

Sample 1	ppm Al
Extract from a drum with corroded plug	373

Sample 2	
Extract from a drum with not corroded plug	5

We decided not to use the extract from those drums with corroded plugs for further NINO/RCB trials.  
In the future plastic plugs will be used.

### 3. LABORATORY

3.1. The second lab technician started work on July 14th.

3.2. An Auto Analyzer Technicon of the second generation has been ordered. It will be used for the simultaneous determination of nitrate-nitrogen, ammonia-nitrogen, reducing sugars and total alcaloids.

### 4. MAINTENANCE OF THE EQUIPMENT IN THE PILOT PLANT

The first extended period of NINO trials was terminated on July 11th. Since then the equipment has been cleaned and overhauled.

#### 4.1. Extraction

During the revision and the cleaning of the V-shape screw different parts were found strongly corroded. All these parts have been ordered in stainless steel.

#### 4.2. Dryer

By dismantling the equipment it was seen that the cylinder as well as the double jacket of the dryer have to be replaced completely. This will be done by the FTR workshop.

#### 4.3. Sterilization line of the extract

The tubes of the heat exchanger were found partly clogged by deposits.

### 5. REFERENCES

- Ref. 1 : Notebook 1, J. Chassot, pages 34-37.  
Ref. 2 : Monthly report, June 1980, Pilot Plant Operations, N. Lüthi  
Ref. 3 : Memo to C. Ruf from A. Widmer, détermination de l'aluminium dans l'extrait de tabac, July 17th, 1980.

N. Lüthi, PROCESS DEVELOPMENT

July 30th 1980/NIL/sde

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